MOLLUSKS BELOW CONOWINGO DAM, MARYLAND

BY WILLIAM B. MARSHALL
U. S. National Museum

On September 10, 1929, the writer, with Dr. C. W. Cooke, U. S. Geological Survey, and Capt. K. B. Squyer, U. S. A., spent several hours collecting mollusks on the east side of the Susquehanna River, for a distance of about half a mile below the Conowingo Dam, Maryland. From the roadway on top of the dam the river southward looks like a paradise for fresh-water mollusks. There are rocks, pools, quiet water and running water; and yet the place yielded only 9 species, two of which were represented by dead specimens only. The pools are almost devoid of vegetable growth, and but little river silt. A couple of pools had a light growth of fine, bright green algae; and in a few pools the bottom was covered by an inch or so of pale yellow, almost impalpable, nearly liquid clay. *Physa* were found in nearly all the pools. In those of bare rock they were creeping about on the rock or on handfuls of leaf mold which were found here and there. They were more abundant in the pools with clay bottoms and here their tracks could be seen running in all directions. *Lymnaea* in smaller numbers were found with the Physas. The pools apparently contain but little life of any kind, other than snails of the genera *Physa* and *Lymnaea*. On the surface of one pool a group of fifteen or twenty of the little black whirligigs (*Gyriscus*) were circling about.

The locality is only about 12 miles above Chesapeake Bay and perhaps four or five above tide-water. It seems likely that later the locality will develop a flora and bottom conditions suitable to many other molluscan species. The dam has changed the river above it into a great lake covering a number of square miles. The quiet condition there now will probably form an ideal residence for many species of mollusks.

The following is a list of the species collected. Although

it contains but nine species, it forms a basis for comparison with future conditions.

Planorbis antrosus Conrad. One living specimen, young. In pool near foot of dam on clay covered bottom.

Physa gyrina Say, *Physa heterostropha* Say. Both were found in numbers, the former the more abundant. In pools near foot of dam; more numerous in those with clay bottom.

Lymnaea modicella Say. Not very abundant. About 25 specimens gathered. In pools near base of dam. Many of them were on the rocky sides of the pool about half inch above the water, in the bright sunlight of mid-day.

On a bar of coarse sand and gravel a third to a half mile below the dam, the following were found:

Goniobasis virginica Gmel. Many living. Most of them are olive color with a brown band on the spire whorls, two bands on the body whorl. Upper whorls nearly smooth; in adults the base is generally prominently spirally ribbed.

Amnicola limosa porata Say. Two, living.

Lampsilis cariosus Say. One, dead but in good condition. Pale orange color with faint radiating greenish stripes on posterior area.

Lampsilis radiatus Gmel. Four, dead.

Elliptio complanatus (Sol.) Dillw. Two living and many dead. The living ones have a brilliant violet-colored nacre. Most dead ones show this color; others show white and a few salmon-color.

From the above it may be seen that *Physa, Elliptio complanatus* and *Goniobasis virginica* compose the great majority of the molluscan denizens. *Lymnaea modicella* has a good foot-hold.

Specimens of all the above are in the U. S. National Museum (Catalogue numbers 381054 to 381062, respectively).